FUEL 2100

Installation and Operation Manual

English 3
Français 11
Español 19
Deutsch 27
Nederlands 35
Svenska 43
Suomi 51

www.navman.com

NAVMAN

FCC Statement

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a normal installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an output on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced technician for help.
- A shielded cable must be used when connecting a peripheral to the serial ports.

Contents

1 Operation 4
Fuel Flow 4
Other Fuel Functions 4
Changing the fuel remaining value 4
Setting the low fuel alarm 5
Alarm activation 5
Resetting the TRIP LOG or the TOTAL LOG 5
2 Instrument Setup 6
Selecting units of measure 6
Calibration 6
3 Installation 7
Location 7
Mounting 7
Wiring Connection 8
Installation of the fuel flow transducer 8
Appendix A - Specifications 9
Appendix B - Troubleshooting Chart 10
Appendix C - How to contact us 59

Important

It is the owner's sole responsibility to install and use the instrument and transducer/s in a manner that will not cause accidents, personal injury or property damage. The user of this product is solely responsible for observing safe boating practices.

NAVMAN NZ LIMITED DISCLAIMS ALL LIABILITY FOR ANY USE OF THIS PRODUCT IN A WAY THAT MAY CAUSE ACCIDENTS, DAMAGE OR THAT MAY VIOLATE THE LAW.

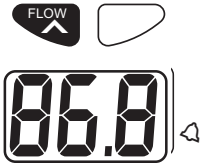
This manual represents the FUEL 2100 as at the time of printing. Navman NZ Limited reserves the right to make changes to specifications without notice.

Governing Language: This statement, any instruction manuals, user guides and other information relating to the product (Documentation) may be translated to, or has been translated from, another language (Translation). In the event of any conflict between any Translation of the Documentation, the English language version of the Documentation will be the official version of the Documentation.

1 Operation

Fuel Flow

Press the key to display the current fuel flow rate.



Other Fuel Functions

Press the key to cycle through the possible functions. Each time the key is pressed the display will show an identifier for 2 seconds before the value is displayed.

Fuel used on trip

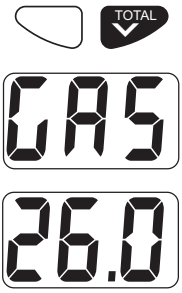
Fuel used in total

Low fuel alarm setting

Fuel remaining in tank

Changing the fuel remaining value

To change the value of fuel remaining in the tank, press the key until the display indicates GAS for two seconds and then displays the current value.



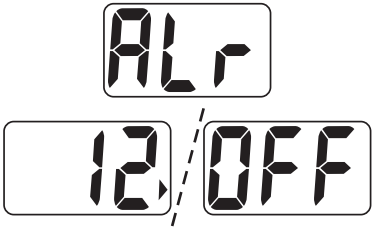
Press and hold both keys for three seconds and the displayed value will begin to flash.

Press and hold for 3 seconds

Use the and keys to change the value. Press and hold both keys for one second to save this new value to memory and to exit this function. The display will indicate GAS and then the new value.

Setting the low fuel alarm

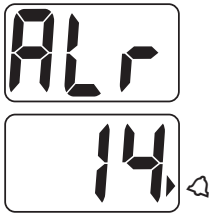
Use the key to select the alarm function. The LCD will indicate ALr for two seconds and will then display the present alarm value. If no alarm value has been entered the LCD will indicate OFF.



Press and hold both keys for three seconds and the displayed value will begin to flash.

Press and hold for 3 seconds

Use the and keys to select the desired alarm value. Press and hold both keys for one second to save this new value to memory and to exit this function. The display will indicate ALr and then the new value.



The arrow pointing at the alarm bell will be activated.

Alarm activation

If the fuel remaining value drops below the fuel alarm value, the alarm will sound and the alarm arrow will flash.

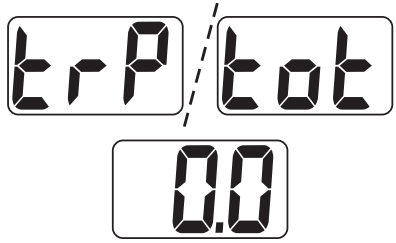
Press any key to mute the alarm. The alarm arrow will continue to flash as long as the alarm condition remains.

Resetting the TRIP LOG or the TOTAL LOG

To reset a log, press the key until the display indicates the name of the log to be reset.

Press and hold both keys for three seconds. Display will show trP or tot for 2 seconds before resetting to zero.

Press and hold for 3 seconds



The trip log value may be reset without changing the total log value.

If the total log is reset to zero, then the trip log will automatically reset to zero.

Note :
If the total log exceeds 999 then both it and the trip log will be reset to zero.

2 Instrument Setup

Selecting units of measure

The FUEL 2100 will indicate fuel values in Litres, Imperial gallons or US gallons. To change the current setting perform the following steps:

1. Power up the unit while holding down the ▼ key.

Hold down during power up

2. When the unit is on, release the ▼ key. The display will indicate the current display unit with:

Imperial Gallons

US Gallons

Litres

3. To select the display unit desired, use the ▲ and ▼ keys to change the value.
4. To exit this mode, press and hold both the ▲ and ▼ keys simultaneously for one second.

Press and hold to exit

Information will now be indicated in the selected display unit.

Calibration

The fuel transducer supplied with the fuel flow meter will provide readings at better than 5% accuracy. Individual calibration will increase this level of accuracy to better than 2% over a fuel flow range of 10.0 to 120 litres per hour. Use the following steps to calibrate your fuel flow meter:

1. Reset the total log value to zero (see previous page).
2. Use a known amount of fuel. The larger the amount the more accurate the calibration will be.
3. Take note of the actual volume of fuel used and the fuel used indicated by the total log. If these two totals are different the instrument may require calibration.
4. Press and hold the ▲ key while applying power

Hold down during power up

5. Release the ▲ key. Display will flash current total log value.

6. Use the ▲ or ▼ keys to make the display indicate the actual volume of fuel used.
7. Press both keys simultaneously for 1 sec to exit.

Press and hold for 1 second

The fuel flow meter is now calibrated.

3 Installation

WARNING

IT IS VERY IMPORTANT TO INSTALL A FUEL FILTER BETWEEN THE FUEL FLOW TRANSDUCER AND THE FUEL TANK. THIS FILTER WILL CATCH LARGER PARTICLES OF DIRT FROM THE FUEL TANK AND PREVENT THE FINE GAUZE FILTER IN THE FUEL FLOW TRANSDUCER FROM BECOMING BLOCKED AS THIS MAY DAMAGE THE ENGINE.

Location

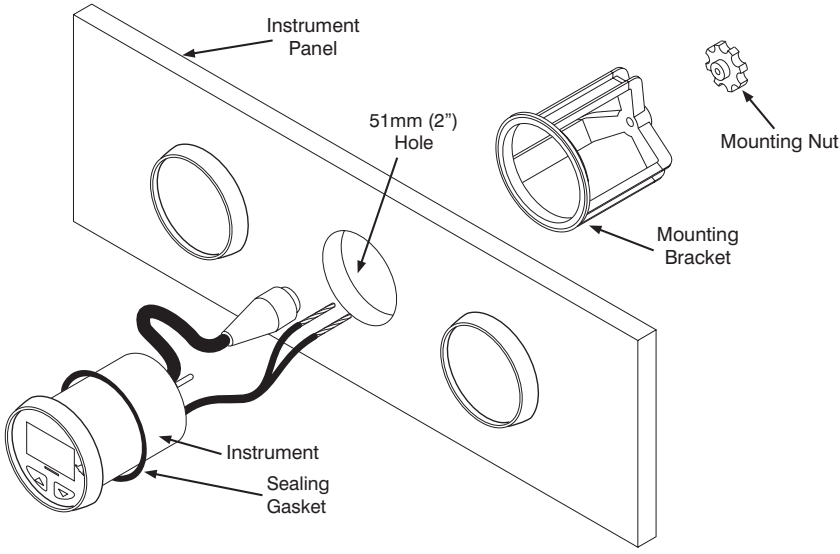
The FUEL 2100 is designed for above or below deck installation. Select a position that is:

- On a flat surface
- At least 300mm (12") from a compass
- At least 500mm (20") from any radio
- Easy to read by the helmsman and crew
- Protected from physical damage
- Accessible to electrical cable connections

Mounting

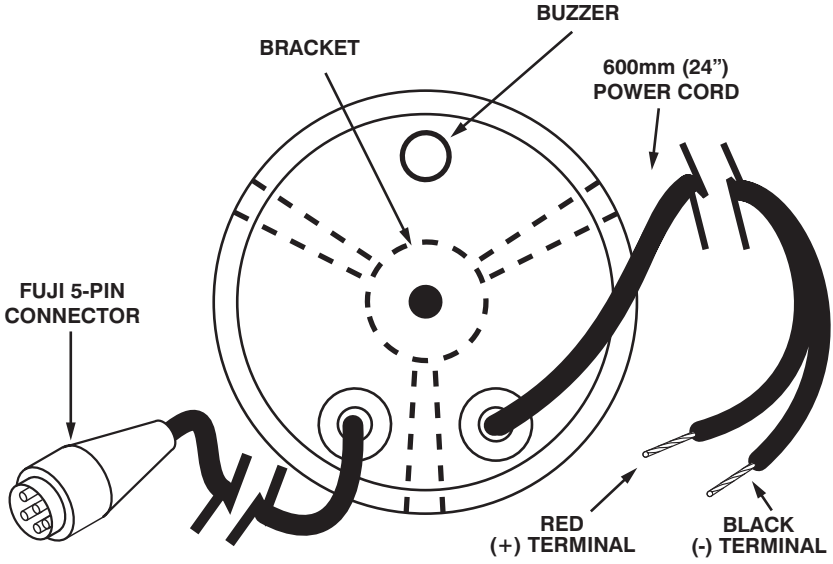
The instrument panel must be 3mm to 19mm ($^1/_8$" to $^3/_4$") in thickness.

- Drill a 51mm (2") hole in the instrument panel.
- Remove brackets and insert the instrument so the back is flush with the instrument panel.
- Slide the bracket over the instrument and tighten the mounting nut until secure.



Wiring Connection

- Keep electrical and transducer cables away from alternator or other noise generating electrical cables. Avoid connecting the instrument to power circuits that share loads with ignition, alternators, inverters and radio transmitters. Electrical power supply connections should always be as short as possible.
- Connect the red wire to the positive supply via a 1 amp fuse or a 1 amp circuit breaker. Connect the black wire to the electrical ground.
- Connect the fuel flow transducer to the five pin transducer inlet cable.



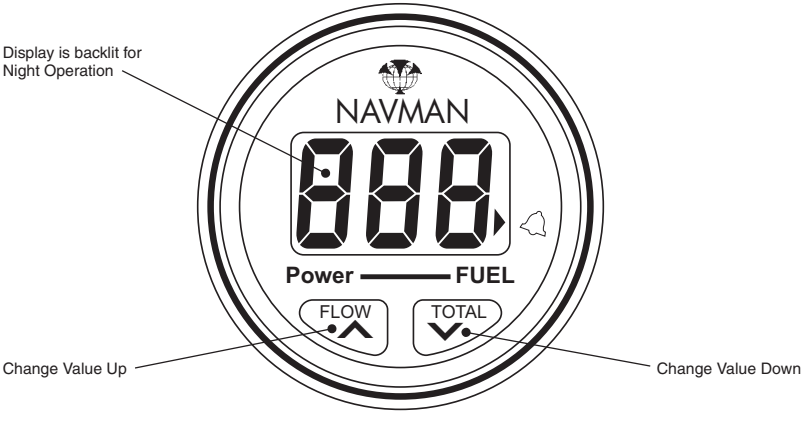
Installation of the fuel flow transducer

The fuel flow transducer is designed for installation in Coast Guard approved 9.5 mm (3/8") flexible fuel line. The transducer MUST be installed AFTER the main fuel filter. It should be located well away from any area where it will be effected by excessive heat or vibration from the engine. It is preferable to mount the transducer in a vertical position.

Drain all the fuel from the flexible fuel line. Cut the fuel line and using the fuel hose fixing clips provided install the transducer so that the FUEL IN side of the transducer connects to the fuel tank.

Appendix A - Specifications

- **Size**
  Mount 51mm diameter hole
  Depth behind face plate 95mm max.
  Display 3-character LCD
- **Colour**
  Black with texture on bezel.
- **Backlighting**
  Red coloured diffused lighting for display.
- **Water Integrity**
  Front will withstand direct water spray.
- **Alarm**
  Audio and visual alarm indicates remaining fuel total has dropped below a preset alarm value.
- **Flow**
  2.5 to 160 litres per hour
  0.5 to 43 US gallons per hour
  0.4 to 36 imperial gallons per hour
- **Logs**
  Logs record fuel used up to 999 display units. Total Log is saved in memory at power down. Both Trip Log and Total Log can be reset via the keypad.
- **Fuel Remaining**
  User enters a fuel value into memory via the key pad. The quantity of fuel used is automatically subtracted from this total. This value remains in memory at power down.
- **Operating Voltage**
  8 V DC to 16.5 V DC.
- **Operating Temperature**
  0 to 50°C (32 to 122°F).
- **Current Drain**
  70 mA max.
- **RF Interference**
  <6 dB quieting on any marine radio channel (with 3 dB gain antenna) within one metre of the instrument. Complies with CE EMC standards EN50081-1 and EN50082-1.



Appendix B - Troubleshooting Chart

No display:

1. Check DC power connections and DC polarity with voltmeter.
2. Check fuse.

No flow reading indicated:

1. Check connection to flow transducer.
2. Remove transducer from fuel line, blow through transducer, a whistling noise will indicate the turbine is rotating.

Low flow reading indicated:

1. Check that the gauze filter is clean. If the filter is not installed fine strands may clog up the turbine.
2. Check calibration is correct.

High or erratic reading:

Check fuel connections are well made. Air in fuel lines will cause erratic or high readings.

NORTH AMERICA

NAVMAN USA INC.
18 Pine St. Ext.
Nashua, NH 03060.
Ph: +1 603 577 9600
e-mail: sales@navmanusa.com

OCEANIA

New Zealand
Absolute Marine Ltd.
Unit B, 138 Harris Road,
East Tamaki, Auckland.
Ph: +64 9 273 9273
e-mail:
navman@absolutemarine.co.nz

Papua New Guinea
Lohberger Engineering
Lawes Road, Konedobu
PO Box 810
Port Moresby
Ph: +675 321 2122
e-mail: loheng@online.net.pg

Australia
NAVMAN AUSTRALIA PTY Limited
Unit 6 / 5-13 Parsons St,
Rozelle, NSW 2039, Australia.
Ph: +61 2 9818 8382
e-mail: sales@navman.com.au

SOUTH AMERICA

Argentina
Costanera UNO S.A.
Av Presidente R Castillo y
Calle 13
1425 Buenos Aires, Argentina.
Ph: +54 11 4312 4545
e-mail:
purchase@costanerauno.com.ar
Website:
www.costanerauno.ar

Brazil
REALMARINE
Estrada do Joa 3862,
CEP2611-020,
Barra da Tijuca, Rio de Janeiro,
Brasil.
Ph: +55 21 2483 9700
e-mail:
vendas@marinedepot.com.br

Equinautic Com Imp Exp de
Equip Nauticos Ltda.
Av. Diario de Noticias 1997 CEP
90810-080, Bairro Cristal, Porto
Alegre - RS, Brasil.
Ph: +55 51 3242 9972
e-mail:
equinautic@equinautic.com.br

ASIA

China
Peaceful Marine Electronics Co. Ltd.
Hong Kong, Guangzhou,
Shanghai, Qindao, Dalian.
E210, Huang Hua Gang Ke Mao
Street, 81 Xian Lie Zhong Road,
510070 Guangzhou, China.
Ph: +86 20 3869 8784
e-mail: sales@peaceful-marine.com
Website: www.peaceful-marine.com

India
Access India Overseas Pvt
A-98, Sector 21, Noida, India
Ph: +91 120 244 2697
e-mail: vkapil@del3.vsnl.net.in

Indonesia
Polytech Nusantara
Graha Paramita 2nd Floor
Jln Denpasar Raya Blok D2
Kav 8 Kuningan, Jakarta 12940
Tel: 021 252 3249

Korea
Kumhomarine Technology Co., Ltd.
#604-842, 2F, 1118-15,
Janglim1-Dong, Saha-Gu
Busan, Korea
Ph: +82 51 293 8589
e-mail: info@kumhomarine.com
Website: www.kumhomarine.com

Maldives
Maizan Electronics Pte. Ltd.
8 Sosunmagu Male
Ph: +960 78 2444
e-mail:
ahmed@maizan.com.mv

Singapore
RIQ PTE Ltd.
81, Defu Lane 10, Hah Building,
#02-00 Singapore 539217
Ph: +65 6741 3723
e-mail: riq@postone.com

Taiwan
Seafirst International Corporation
No.281, Hou-An Road
Chien-Chen Dist.
Kaohsiung, Taiwan R.O.C.
Ph: +886 7 831 2688
e-mail: seafirst@seed.net.tw

Thailand
Thong Electronics (Thailand)
Company Ltd.
923/588 Thaprong Road,
Mahachai,
Muang, Samutsakhon 74000,
Thailand.
Ph: +66 34 411 919
e-mail: thonge@cscoms.com

Vietnam
Haidang Co. Ltd.
16A/A1E, Ba thang hai St.
District 10, Hochiminh City.
Ph: +84 8 86321 59
e-mail: sales@haidangvn.com
Website: www.haidangvn.com

MIDDLE EAST

Lebanon and Syria
Letro, Balco Stores,
Moutran Street, Tripoli VIA Beirut.
Ph: +961 6 624512
e-mail: balco@cyberia.net.lb

United Arab Emirates
Kuwait, Oman, Iran & Saudi Arabia
Abdullah Moh'd Ibrahim
Trading, opp Creak Rd.
Baniyas Road, Dubai.
Ph: +971 4 229 1195
e-mail: mksq99@email.com

AFRICA

South Africa
Pertec (Pty) Ltd Coastal,
Division No.16 Paarden Eiland Rd.
Paarden Eiland, 7405
Postal Address: PO Box 527,
Paarden Eiland 7420
Cape Town, South Africa.
Ph: +27 21 511 5055
e-mail: info@kfa.co.za

EUROPE

France, Belgium and Switzerland
PLASTIMO INTERNATIONAL
15, rue Ingénieur Verrière,
BP435,
56325 Lorient Cedex.
Ph: +33 2 97 87 36 36
e-mail: plastimo@plastimo.fr
Website: www.plastimo.fr

Germany
PLASTIMO DEUTSCHLAND
15, rue Ingénieur Verrière
BP435- 56325 Lorient Cedex.
Ph: +49 6105 92 10 09
+49 6105 92 10 10
+49 6105 92 10 12
e-mail:
plastimo.international@plastimo.fr
Website: www.plastimo.de

Italy
PLASTIMO ITALIA
Nuova Rade spa, Via del Pontasso 5
I-16015 CASELLA SCRIVIA (GE).
Ph: +39 1096 8011
e-mail: info@nuovarade.com
Website: www.plastimo.it

Holland
PLASTIMO HOLLAND BV.
Industrieweg 4-6,
2871 RP SCHOONHOVEN.
Ph: +31 182 320 522
e-mail: info@plastimo.nl
Website: www.plastimo.nl

United Kingdom
PLASTIMO Mfg. UK Ltd.
School Lane - Chandlers Ford
Industrial Estate,
EASTLEIGH - HANTS S053 ADG.
Ph: +44 23 8026 3311
e-mail: sales@plastimo.co.uk
Website: www.plastimo.co.uk

Sweden, Denmark or Finland
PLASTIMO NORDIC AB.
Box 28 - Lundenvägen 2,
47321 HENAN.
Ph: +46 304 360 60
e-mail: info@plastimo.se
Website: www.plastimo.se

Spain
PLASTIMO ESPAÑA, S.A.
Avenida Narcís Monturiol, 17
08339 VILASSAR DE DALT,
(Barcelona).
Ph: +34 93 750 75 04
e-mail: plastimo@plastimo.es
Website: www.plastimo.es

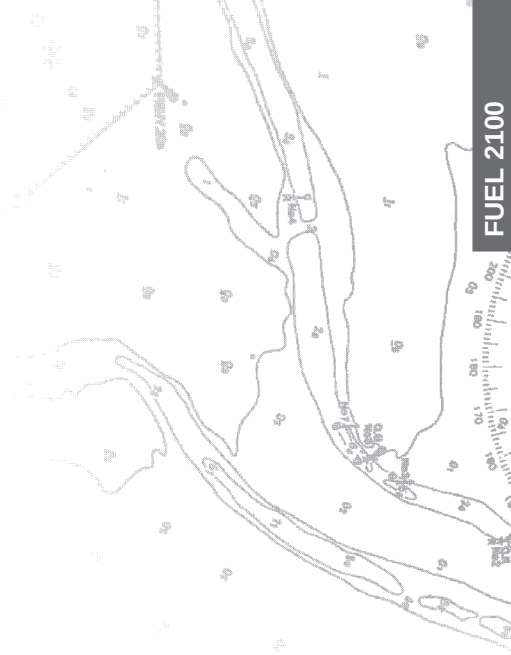
Portugal
PLASTIMO PORTUGAL
Avenida de India N°40
1300-299 Lisbon
Ph: +351 21 362 04 57
e-mail:
plastimo@siroco-nautica.pt

Other countries in Europe
PLASTIMO INTERNATIONAL
15, rue Ingénieur Verrière
BP435
56325 Lorient Cedex, France.
Ph: +33 2 97 87 36 59
e-mail:
plastimo.international@plastimo.fr
Website: www.plastimo.com

REST OF WORLD / MANUFACTURERS

Navman NZ Limited
13-17 Kawana St. Northcote.
P.O. Box 68 155 Newton,
Auckland, New Zealand.
Ph: +64 9 481 0500
e-mail:
marine.sales@navman.com
Website: www.navman.com

Made in New Zealand
MN000207A



FUEL 2100

NAVMAN

Lon 174° 44.535'E

Lat 36° 48.404'S